

REMARKS

Claims 1-12 are pending in this application. By this Amendment, claims 1, 4, 7, 8 and 10 are amended. No new matter is added. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (as the amendments amplify issues previously discussed throughout prosecution); (c) satisfy a requirement of form asserted in the previous Office Action; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

The Office Action rejects claim 1-3 and 10-12 on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-3 and 5-7 of Curry (U.S. Patent No. 6,987,882) in view of Zhu (U.S. Patent No. 6,301,386) and Barthel (U.S. Patent No. 6,731,800); and rejects claims 4-9 on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 5-7 and 9-11 of Curry in view of Barthel. These rejections are respectfully traversed.

To obviate these rejections, a Terminal Disclaimer is co-filed along with this amendment. Thus, Applicants respectfully request that the non-statutory obviousness-type double patenting rejections be withdrawn.

The Office Action rejects claims 4-9 under 35 U.S.C. §103(a) as being unpatentable over Barthel (U.S. Patent No. 6,731,800); and rejects claims 1-3 and 10-12 under 35 U.S.C. §103(a) as being unpatentable over Barthel in view of Zhu (U.S. Patent No. 6,301,386). Applicants respectfully traverse these rejections.

Applicants respectfully assert that Barthel and Zhu, either individually or in combination, fail to disclose or suggest sub-sampling, by a programmable amount, a rough foreground signal and a rough background signal while ignoring undefined pixels, as recited in independent claim 1 and similarly recited in independent claims 4, 7 and 10. This feature is described, for example, in Applicant's specification, for example, at least at pages 25-28.

Barthel, at col. 6, lines 43-67 and col. 7, lines 1-4 and Fig. 3, merely discloses a binary/quantized image formed by recognizing regions of text and discarding all other nontext regions with the use of a horizontal and vertical Sobel filter and a Laplace filter. The edge activity determined is compared with a minimum activity value and, if it falls below this value, is set equal to zero. The average edge activity and maximum edge activity, as well as the variance of the inner region, are determined in a step subsequently tested to see whether the average edge activity as well as the maximum edge activity are above the specified minimum or below a maximum value. The resulting regions are classified as either foreground or background regions accordingly.

Zhu fails to cure the deficiencies of Barthel. Zhu, at Fig. 1 and the abstract, discloses a method to identify text from a gray-scale image. A gray-scale image is sub-sampled before a preprocessing step, which remains vertical and horizontal lines. Zhu also discloses the separation of foreground and background regions, as well as region filtering and imaging. Although Zhu discloses the sub-sampling of an image before separating that the image into different layers, Zhu fails to disclose (1) sub-sampling a rough background (or foreground) and (2) ignoring undefined pixels.

Thus, Barthel and Zhu, either individually or in combination, fail to disclose sub-sampling, by a programmable amount, a rough foreground signal and a rough background signal while ignoring undefined pixels, as recited in independent claim 1, and similarly recited in independent claims 4, 7 and 10.

In accordance with the above remarks, Applicants respectfully submit that independent claims 1, 4, 7 and 10 define patentable subject matter. Claims 2, 3, 5, 6, 8, 9, 11 and 12 each depend from one of claims 1, 4, 7 and 10, respectively, and therefore, as well as for the additional features they recite, also define patentable subject matter. Thus, Applicants respectfully request that the Examiner withdraw the rejections.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-12 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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